

# JUCM™

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## Evaluation and Management of Lower Extremity Edema

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# Urgent Care Without a Paddle



Economy getting you down. Feeling like you're up the veritable creek. Whether you're an owner, manager, or practitioner, if you're not feeling the heat, you should be.

That's not to say you should get out of the kitchen; just be a better chef.

There has never been a crisis in history that did not create great opportunity for those who know how to find it. During a crisis of any kind, two classes of people settle into their familiar camps:

- The "woe-is-me" camp: "Why does it have to be so hard?" "Why did this happen to me?"

The woe-is-me camp spends a lot of time thinking and talking about their unforeseen lot, and doing very little about it. Wallowing in self pity has never proven an effective strategy for surviving a crisis.

- The "more-for-me" camp: While everyone else is wallowing, these wily folks are out looking for grub. The wise raccoon who finds his favorite dumpster emptied doesn't lie around and cry his raccoon eyes out. He heads straight out for the next great find. Often, he is surprised when he finds an even better treasure out there than his beloved dumpster. Having been satisfied, he had just never bothered looking.

While the woe-is-me camp commiserates, the more-for-me camp innovates. After all, the only effective way to respond to such circumstances is to think of a better mousetrap, a different approach, a new angle.

Crises inevitably cause paradigm shifts. Within every paradigm shift is a new way of doing things successfully. If you want to come out on top, you've got to think innovatively. "Respond" instead of "react" to the new paradigm.

So, back in our urgent care canoe, how can we respond? It should be noted that urgent care has always been a responsive industry. Our very being was born out of a "response" to an inefficient, inconvenient, impersonal, and expensive healthcare system.

In the current crisis, urgent care is positioned well to adapt to the new healthcare paradigm: less insured, more patient responsibility, less money, less time.

1. Be more efficient. Utilize innovative shortcuts. Rethink how staff is utilized. Learn time management.

2. Be more friendly. Be empathetic. Resist the urge to judge. Nothing slows down an encounter more than lack of trust; lapses in the aforementioned three are trust destroyers.

*"Status quo will not work anymore."*

3. Cater to *everyone*. It's not the time to be picky about who "deserves" your care.
4. Build relationships with your colleagues—with specialists, primary care, hospitals, EDs.

The cheapest and most effective form of marketing is to build a personal relationship, then follow through with your promises of great care, great service, and great communication.

5. Rally your staff. A canoe with one paddler is a wayward vessel. Make sure your staff recognizes the importance of exceptional service and follow-through. They should have a vested interest in supporting the practice, if for no other reason than job security.

Go the extra mile by encouraging them to be part of something special in uncertain times. Everyone wants to be a winner. Engage them in the pursuit of innovative ways to secure the practice—not out of fear, rather out of commitment to excellence.

6. Challenge the norm. Status quo will not work anymore. Everyone must be ready to work smarter, not just harder.
7. Identify competitors' weaknesses and move quickly to exploit them.
8. Finally, don't just sit in your canoe; paddle, paddle, paddle! ■

Lee A. Resnick, MD  
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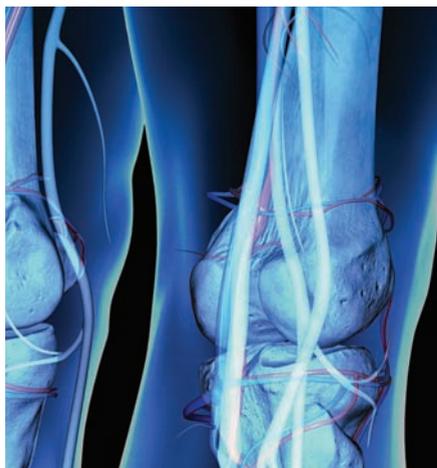
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### CLINICAL

## 9 Evaluation and Management of Lower Extremity Edema

Chronic venous insufficiency, deep vein thrombosis, or a diagnosis with a severity somewhere in between? Assessing the differential diagnoses is the key to fostering optimal outcomes in patients presenting with lower extremity edema.

By Michael S. Miller, DO

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A suspicious mind, a thorough history, and awareness of the proper tests to administer can help you flag patients in need of emergent referral for pulmonary embolism.

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It's a simple truth: Patients can't visit you when they need care if they don't know you're there. Making sure your urgent care center stays 'top of mind' can be beneficial for you and the consumer.

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**In the next issue of JUCM:** *Urgent care physicians routinely encounter patients with high blood pressure, but management—particularly for those patients with precarious elevations—remains controversial. A review of principles for managing elevated blood pressure in the urgent care setting.*

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# JUCM

### EDITOR-IN-CHIEF

**Lee A. Resnick, MD**  
[editor@jucm.com](mailto:editor@jucm.com)

### EDITOR

**J. Harris Fleming, Jr.**  
[hj Fleming@jucm.com](mailto:hjfleming@jucm.com)

### CONTRIBUTING EDITORS

Nahum Kovalski, BSc, MDCM  
Frank Leone, MBA, MPH  
John Shufeldt, MD, JD, MBA, FACEP  
David Stern, MD, CPC

### ART DIRECTOR

**Tom DePrenda**  
[tdeprenda@jucm.com](mailto:tdeprenda@jucm.com)



2 Split Rock Road, Mahwah NJ 07430

### PUBLISHERS

**Peter Murphy**  
[pmurphy@braveheart-group.com](mailto:pmurphy@braveheart-group.com)  
(201) 847-1934

**Stuart Williams**  
[swilliams@braveheart-group.com](mailto:swilliams@braveheart-group.com)  
(201) 529-4004

### Mission Statement

**JUCM** The Journal of Urgent Care Medicine supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing healthcare marketplace. As the Official Publication of the Urgent Care Association of America, **JUCM** seeks to provide a forum for the exchange of ideas and to expand on the core competencies of urgent care medicine as they apply to physicians, physician assistants, and nurse practitioners.

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## FROM THE EXECUTIVE DIRECTOR

# Time in a Bottle

■ LOU ELLEN HORWITZ, MA

With apologies to Jim Croce, this column is not about preserving the moment. It is about *finding* the moments. UCAOA recently did a member survey asking about various capabilities we have (JobBank, Article Search, Lecture Library, Online Forums, etc.) and whether you are using them—and if not, why not?

The overwhelming “why not” has turned out to be... *time*. It’s not that the resources aren’t great, it’s just that the day is already so full that by the time you remember the resources exist you are already in the car on the way home after a long day.

We get it. If you are familiar with Steven Covey’s *Seven Habits of Highly Effective People* (1989)—and even if you aren’t—you realize that you spend most of your day on either “not important, urgent” activities such as interruptions, impromptu meetings, etc., or at best on “important, urgent” activities like crisis management and deadline-driven projects.

The area that gets neglected, to the detriment of your center, is the “important, not urgent” one.

Activities in this category include relationship building, planning and strategy, and professional development—things that will not put you out of business today if neglected, but may indeed do that in the long run.

We are all likely “guilty” of neglecting this area. It’s extremely difficult not to neglect it. It takes incredible discipline to set aside, even for a day, the time you need to attend to these activities. Sadly, they often need more than just one day, so when you do get to them, they are still getting the short end of your stick.

It also demands culture change for your staff and colleagues to realize that these kinds of activities are just as important, if not more so, than you taking time to deal with *their* problem at that moment. They have to learn to man-

age without you sometimes so you can do the activities that *only you* can do.

If they sold time in bottles next to the vitamin-enhanced water, this would be no big deal. But of course, they don’t. You have to manufacture it yourself. (Actually, you have to steal it.)

*“Try to find, steal, borrow, or make time to invest in your center.”*

The three or four days you have stolen from some other activity to attend the National Urgent Care Convention, for instance, must be paid back somehow. Will that time be paid back in the time/resource/money-savings information you pick up at the meeting? That’s the goal, but we recognize it is still a sacrifice.

There are no easy answers to this. All of the answers are hard in *The Moment*. It’s hard to let the call go to voicemail. It’s hard to ignore the e-mail popping up. It’s hard to wonder what’s going on outside your door while the staff has been told that you are in a meeting. But, these are choices that must be made as investments in your organization’s future—or you are just running around like the proverbial chicken without a head (and let’s hope you don’t try to cross the road).

As a word of encouragement, know that it *can* be done. I had the pleasure of visiting two sets of centers recently that were going through their Joint Commission site visits, and they had made the time to really step back and look at their processes and how they could be better. There are some exemplary leaders and staffs at work in those centers, but they all acknowledged how incredibly difficult it was to find time to do that kind of introspection and examination, though it was ultimately worth it.

This spring, try to find, steal, borrow, or make time to invest in your centers. We all know it will be time well spent toward your success in the future, if only in retrospect. ■



**Lou Ellen Horwitz** is executive director of the Urgent Care Association of America. She may be contacted at [lhorwitz@ucaoa.org](mailto:lhorwitz@ucaoa.org).



## JUCM CONTRIBUTORS

With its unseen but dire risks and broad range of possible causes, lower extremity edema poses a particular challenge to the urgent care clinician. Proper assessment of the differential diagnoses is the first step toward optimal outcomes.



That's the message of Evaluation and Management of Lower Extremity Edema (page 9) by **Michael S. Miller, DO, FACOS, FAPWCA, CWS**. Dr. Miller is the

founder and medical director of The Wound Healing Centers of Indiana in Bedford and Indianapolis, IN. Dr. Miller is also clinical consultant for several domestic and international wound care companies, and has written numerous articles and book chapters on topics related to chronic wounds and wound healing.

Pulmonary embolism is another possibly catastrophic condition with the potential to evade notice. Key factors to watch for are detailed in A Patient with Suspected Pulmonary Embolism (page 19), a new case report by **John Shufeldt, MD, JD, MBA, FACEP**, chief executive officer of NextCare, Inc. and founder of the Shufeldt Law Firm, and **Kelli Hickie**, an honors student at Point Loma Nazarene University in San Diego; Ms. Hickie is pursuing a degree in biology and chemistry, with plans to attend medical school in the future.



An equally serious threat—albeit one to your business's well being, not your patient's—is lack of awareness that your urgent care center even exists. **Alan A. Ayers, MBA, MAcc** addresses that problem in

Getting the Word Out: An Introduction to Urgent Care Advertising (page 27). Mr. Ayers will be one of several JUCM contributors speaking at the National Urgent Care Convention in Las Vegas next month.

We also welcome a new contributor to our Insights in Images department (page 24). **Deepa Narayanan, MD** shares the story (and images) of a patient who presented with a suspicious rash on his feet shortly after returning from a camping trip—during which he experienced numerous tick bites.

We would welcome your contributions, too. If you have an idea for an article, send it to Editor-in-Chief **Lee A. Resnick, MD**, at [editor@jucm.com](mailto:editor@jucm.com). ■



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## Evaluation and Management of Lower Extremity Edema

**Urgent message:** The high specificity but broad range of possible causes associated with a primary complaint of lower extremity edema poses a particular challenge to the urgent care clinician. Proper assessment of the differential diagnoses is the first step toward optimal outcomes, whether they be facilitated by treatment or referral.

Michael S. Miller, DO

Patients presenting to urgent care with a primary complaint of edema of the lower extremities of any duration can pose a particularly vexing challenge for the practitioner. While the symptom is quite specific, it could be indicative of any number of diagnoses; is the root cause chronic venous insufficiency, or a more emergent condition requiring immediate referral (e.g., deep vein thrombosis)?

Further, how do you differentiate between stasis dermatitis and cellulitis, thereby avoiding inappropriate antibiotic therapy?

Such determinations are essential preparation for choosing appropriate treatment or referring the patient to the appropriate setting for care.

### Introduction

The word *circulation* is often misused by physicians or



misunderstood by patients. While it is usually used in reference to the peripheral blood flow in the arteries, circulation more properly refers to the entire course of blood flow from the heart through the peripheral arteries of the distal tissues via the capillaries, all the way to its return via the venous system to the heart.

Patients may find it easier to grasp the true meaning if you explain that the word itself was derived from the Latin word *circulare*—to make a circle.

Equally problematic is the diagnosis of “poor circulation”

made by a simple visual inspection of the legs when, in fact, no arterial compromise exists. Consideration should always include both the arterial and the venous.

Arterial circulation can easily be assessed via a well-taken history (“How far can you walk? Does the pain make you stop walking? Do you have to rest—and for

Figure 1.



Advanced venous disease with stasis dermatitis, lipodermatosclerosis, and many small venous insufficiency ulcers.

Figure 2.



Longstanding venous disease. Note the “inverted Coke bottle appearance” due to scarring and contraction of the lower leg.

how long?”, etc.), palpation of the pulses, or Doppler signals (though the latter is unlikely to be employed in the urgent care setting).

The venous system has been somewhat more diagnostically elusive, however, save for the presence of varicose veins.

### The Peripheral Venous System

In fact, the peripheral venous system is itself fairly simple to assess.

To review: The capillaries receive deoxygenated “dirty” blood from the tissues/cells, and transfer it to larger venules which combine into veins. While capillary filling is hydrostatic in nature, the propulsion of venous blood from distal to proximal involves a slightly more active system.

A cross section of the leg would show the outer layer of skin, a subcutaneous fat layer, a circumferential supporting fascial layer, and then the deeper structures of muscle, bone, arteries, veins, etc.

In simplest terms, activation of the calf muscle squeezes the veins against the fascia, creating an internal pressure to move the venous blood. One-way valves allow the blood to go either distal to proximal or from superficial to deep to the larger veins (which then go distal to proximal). Each squeeze of the muscle actively promotes this flow. Elevating the legs simply and passively allows the blood to follow the same flow course but at a much reduced rate since there is only gravity (and at an angle less than 90°) to move the blood. This is how venous return occurs.

Of course, it is easy to see how compromise can also occur. Pregnancy, obesity, trauma, genetics, and surgery of adjacent or proximal areas or on the veins themselves (such as removal for a bypass) can all increase the intravenous pressure, thus creating venous hypertension.

Early on, venous dilatation may present as either small *spider* veins or larger *varicose* veins. These occur when the superficial veins become engorged from venous hypertension and bulge through the superficial fascia. (If you take your finger and run it transversely across a varicose vein, you will feel the edges of the fascia it is bulging through.)

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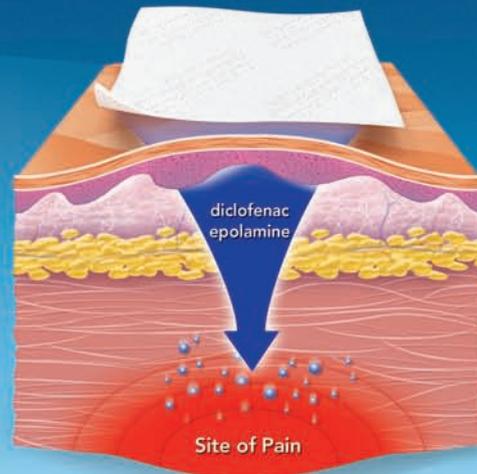
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A patient with symptoms and/or signs of liver dysfunction, or with a history of an abnormal liver test, should be monitored for a more severe hepatic reaction and therapy stopped. Anemia is sometimes seen in patients receiving NSAIDs and platelet inhibition has been shown to prolong bleeding times.

Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in maintaining renal perfusion. FLECTOR® Patch is not recommended in patients with advanced renal disease.

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Brief Summary

Rx only

**Cardiovascular Risk:** NSAIDs may cause an increased risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke, which can be fatal. This risk may increase with duration of use. Patients with cardiovascular disease or risk factors for cardiovascular disease may be at greater risk. (See **WARNINGS** and Full Prescribing Information, **CLINICAL TRIALS**). • Flector® Patch is contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery (see **WARNINGS**).

**Gastrointestinal Risk:** NSAIDs cause an increased risk of serious gastrointestinal adverse events including bleeding, ulceration, and perforation of the stomach or intestines, which can be fatal. These events can occur at any time during use and without warning symptoms. Elderly patients are at greater risk for serious gastrointestinal events (See **WARNINGS**).

**INDICATION AND USAGE:** Carefully consider the potential benefits and risks of Flector® Patch and other treatment options before deciding to use Flector® Patch. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goals (see **WARNINGS**).

Flector® Patch is indicated for the topical treatment of acute pain due to minor strains, sprains, and contusions.

**CONTRAINDICATIONS:** Flector® Patch is contraindicated in patients with known hypersensitivity to diclofenac.

Flector® Patch should not be given to patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactoid-like reactions to NSAIDs have been reported in such patients (see **WARNINGS - Anaphylactoid Reactions**, and **PRECAUTIONS - Preexisting Asthma**).

Flector® Patch is contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery (see **WARNINGS**).

Flector® Patch should not be applied to non-intact or damaged skin resulting from any etiology e.g. exudative dermatitis, eczema, infected lesion, burns or wounds.

**WARNINGS: CARDIOVASCULAR EFFECTS: Cardiovascular Thrombotic Events:** Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious cardiovascular (CV) thrombotic events, myocardial infarction, and stroke, which can be fatal. All NSAIDs, both COX-2 selective and nonselective, may have a similar risk. Patients with known CV disease or risk factors for CV disease may be at greater risk. To minimize the potential risk for an adverse CV event in patients treated with an NSAID, the lowest effective dose should be used for the shortest duration possible. Physicians and patients should remain alert for the development of such events, even in the absence of previous CV symptoms. Patients should be informed about the signs and/or symptoms of serious CV events and the steps to take if they occur.

There is no consistent evidence that concurrent use of aspirin mitigates the increased risk of serious CV thrombotic events associated with NSAID use. The concurrent use of aspirin and an NSAID does increase the risk of serious GI events (see **GI WARNINGS**). Two large, controlled, clinical trials of a COX-2 selective NSAID for the treatment of pain in the first 10-14 days following CABG surgery found an increased incidence of myocardial infarction and stroke (see **CONTRAINDICATIONS**).

**Hypertension:** NSAIDs, including Flector® Patch, can lead to onset of new hypertension or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Patients taking thiazides or loop diuretics may have impaired response to these therapies when taking NSAIDs. NSAIDs, including Flector® Patch, should be used with caution in patients with hypertension. Blood pressure (BP) should be monitored closely during the initiation of NSAID treatment and throughout the course of therapy.

**Congestive Heart Failure and Edema:** Fluid retention and edema have been observed in some patients taking NSAIDs. Flector® Patch should be used with caution in patients with fluid retention or heart failure.

**Gastrointestinal Effects - Risk of Ulceration, Bleeding, and Perforation:** NSAIDs, including Flector® Patch, can cause serious gastrointestinal (GI) adverse events including inflammation, bleeding, ulceration, and perforation of the stomach, small intestine, or large intestine, which can be fatal. These serious adverse events can occur at any time, with or without warning symptoms, in patients treated with NSAIDs. Only one in five patients, who develop a serious upper GI adverse event on NSAID therapy, is symptomatic. Upper GI ulcers, gross bleeding, or perforation caused by NSAIDs occur in approximately 1% of patients treated for 3-6 months, and in about 2-4% of patients treated for one year. These trends continue with longer duration of use, increasing the likelihood of developing a serious GI event at some time during the course of therapy. However, even short-term therapy is not without risk.

NSAIDs should be prescribed with extreme caution in those with a prior history of ulcer disease or gastrointestinal bleeding. Patients with a prior history of peptic ulcer disease and/or gastrointestinal bleeding who use NSAIDs have a greater than 10-fold increased risk for developing a GI bleed compared to patients with neither of these risk factors. Other factors that increase the risk for GI bleeding in patients treated with NSAIDs include concomitant use of oral corticosteroids or anticoagulants, longer duration of NSAID therapy, smoking, use of alcohol, older age, and poor general health status. Most spontaneous reports of fatal GI events are in elderly or debilitated patients and therefore, special care should be taken in treating this population.

To minimize the potential risk for an adverse GI event in patients treated with an NSAID, the lowest effective dose should be used for the shortest possible duration. Patients and physicians should remain alert for signs and symptoms of GI ulceration and bleeding during NSAID therapy and promptly initiate additional evaluation and treatment if a serious GI adverse event is suspected. This should include discontinuation of the NSAID until a serious GI adverse event is ruled out. For high risk patients, alternate therapies that do not involve NSAIDs should be considered.

**Renal Effects:** Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion. In these patients, administration of a nonsteroidal anti-inflammatory drug may cause a dose-dependent reduction in prostaglandin formation and, secondarily, in renal blood flow, which may precipitate overt renal decompensation. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics and ACE inhibitors, and the elderly. Discontinuation of NSAID therapy is usually followed by recovery to the pretreatment state.

**Advanced Renal Disease:** No information is available from controlled clinical studies regarding the use of Flector® Patch in patients with advanced renal disease. Therefore, treatment with Flector® Patch is not recommended in these patients with advanced renal disease. If Flector® Patch therapy is initiated, close monitoring of the patient's renal function is advisable.

**Anaphylactoid Reactions:** As with other NSAIDs, anaphylactoid reactions may occur in patients without known prior exposure to Flector® Patch. Flector® Patch should not be given to patients with the aspirin triad. This symptom complex typically occurs in asthmatic patients who experience rhinitis with or without nasal polyps, or who exhibit severe, potentially fatal bronchospasm after taking aspirin or other NSAIDs (see **CONTRAINDICATIONS** and **PRECAUTIONS - Preexisting Asthma**). Emergency help should be sought in cases where an anaphylactoid reaction occurs.

**Skin Reactions:** NSAIDs, including Flector® Patch, can cause serious skin adverse events such as exfoliative dermatitis, Stevens-Johnson Syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. These serious events may occur without warning. Patients should be informed about the signs and symptoms of serious skin manifestations and use of the drug should be discontinued at the first appearance of skin rash or any other sign of hypersensitivity.

**Pregnancy:** In late pregnancy, as with other NSAIDs, Flector® Patch should be avoided because it may cause premature closure of the ductus arteriosus.

**PRECAUTIONS: General:** Flector® Patch cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may lead to disease exacerbation. Patients on prolonged corticosteroid therapy should have their therapy tapered slowly if a decision is made to discontinue corticosteroids.

The pharmacological activity of Flector® Patch in reducing inflammation may diminish the utility of these diagnostic signs in detecting complications of presumed noninfectious, painful conditions.

**Hepatic Effects:** Borderline elevations of one or more liver tests may occur in up to

15% of patients taking NSAIDs including Flector® Patch. These laboratory abnormalities may progress, may remain unchanged, or may be transient with continuing therapy. Notable elevations of ALT or AST (approximately three or more times the upper limit of normal) have been reported in approximately 1% of patients in clinical trials with NSAIDs. In addition, rare cases of severe hepatic reactions, including jaundice and fatal fulminant hepatitis, liver necrosis and hepatic failure, some of them with fatal outcomes have been reported.

A patient with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, should be evaluated for evidence of the development of a more severe hepatic reaction while on therapy with Flector® Patch. If clinical signs and symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g. eosinophilia, rash, etc.), Flector® Patch should be discontinued.

**Hematological Effects:** Anemia is sometimes seen in patients receiving NSAIDs. This may be due to fluid retention, occult or gross GI blood loss, or an incompletely described effect upon erythropoiesis. Patients on long-term treatment with NSAIDs, including Flector® Patch, should have their hemoglobin or hematocrit checked if they exhibit any signs or symptoms of anemia.

NSAIDs inhibit platelet aggregation and have been shown to prolong bleeding time in some patients. Unlike aspirin, their effect on platelet function is quantitatively less, of shorter duration, and reversible. Patients receiving Flector® Patch who may be adversely affected by alterations in platelet function, such as those with coagulation disorders or patients receiving anticoagulants, should be carefully monitored.

**Preexisting Asthma:** Patients with asthma may have aspirin-sensitive asthma. The use of aspirin in patients with aspirin-sensitive asthma has been associated with severe bronchospasm which can be fatal. Since cross reactivity, including bronchospasm, between aspirin and other nonsteroidal anti-inflammatory drugs has been reported in such aspirin-sensitive patients, Flector® Patch should not be administered to patients with this form of aspirin sensitivity and should be used with caution in patients with preexisting asthma.

**Eye Exposure:** Contact of Flector® Patch with eyes and mucosa, although not studied, should be avoided. If eye contact occurs, immediately wash out the eye with water or saline. Consult a physician if irritation persists for more than an hour.

**Accidental Exposure in Children:** Even a used Flector® Patch contains a large amount of diclofenac epolamine (as much as 170 mg). The potential therefore exists for a small child or pet to suffer serious adverse effects from chewing or ingesting a new or used Flector® Patch. It is important for patients to store and dispose of Flector® Patch out of the reach of children and pets.

**Information for Patients: Patients should be informed of the following information before initiating therapy with an NSAID and periodically during the course of ongoing therapy. Patients should also be encouraged to read the NSAID Medication Guide that accompanies each prescription dispensed.**

1. Flector® Patch, like other NSAIDs, may cause serious CV side effects, such as MI or stroke, which may result in hospitalization and even death. Although serious CV events can occur without warning symptoms, patients should be alert for the signs and symptoms of chest pain, shortness of breath, weakness, slurring of speech, and should seek medical advice when observing any indicative sign or symptoms. Patients should be apprised of the importance of this follow-up (see **WARNINGS, Cardiovascular Effects**).

2. Flector® Patch, like other NSAIDs, may cause GI discomfort and, rarely, serious GI side effects, such as ulcers and bleeding, which may result in hospitalization and even death. Although serious GI tract ulcerations and bleeding can occur without warning symptoms, patients should be alert for the signs and symptoms of ulcerations and bleeding, and should seek medical advice when observing any indicative sign or symptoms including epigastric pain, dyspepsia, melena, and hematemesis. Patients should be apprised of the importance of this follow-up (see **WARNINGS, Gastrointestinal Effects: Risk of Ulceration, Bleeding, and Perforation**).

3. Flector® Patch, like other NSAIDs, may cause serious skin side effects such as exfoliative dermatitis, SJS, and TEN, which may result in hospitalizations and even death. Although serious skin reactions may occur without warning, patients should be alert for the signs and symptoms of skin rash and blisters, fever, or other signs of hypersensitivity such as itching, and should seek medical advice when observing any indicative signs or symptoms. Patients should be advised to stop the drug immediately if they develop any type of rash and contact their physicians as soon as possible. 4. Patients should be instructed to promptly report signs or symptoms of unexplained weight gain or edema to their physicians (see **WARNINGS, Cardiovascular Effects**).

5. Patients should be informed of the warning signs and symptoms of hepatotoxicity (e.g. nausea, fatigue, lethargy, pruritus, jaundice, right upper quadrant tenderness, and "flu-like" symptoms). If these occur, patients should be instructed to stop therapy and seek immediate medical help. 6. Patients should be informed of the signs of an anaphylactoid reaction (e.g. difficulty breathing, swelling of the face or throat). If these occur, patients should be instructed to seek immediate emergency help (see **WARNINGS**).

7. In late pregnancy, as with other NSAIDs, Flector® Patch should be avoided because it may cause premature closure of the ductus arteriosus. 8. Patients should be advised not to use Flector® Patch if they have an aspirin-sensitive asthma. Flector® Patch, like other NSAIDs, could cause severe and even fatal bronchospasm in these patients (see **PRECAUTIONS, Preexisting Asthma**). Patients should discontinue use of Flector® Patch and should immediately seek emergency help if they experience wheezing or shortness of breath. 9. Patients should be informed that Flector® Patch should be used only on intact skin. 10. Patients should be advised to avoid contact of Flector® Patch with eyes and mucosa. Patients should be instructed that if eye contact occurs, they should immediately wash out the eye with water or saline, and consult a physician if irritation persists for more than an hour. 11. Patients and caregivers should be instructed to wash their hands after applying, handling or removing the patch. 12. Patients should be informed that, if Flector® Patch begins to peel off, the edges of the patch may be taped down. 13. Patients should be instructed not to wear Flector® Patch during bathing or showering. Bathing should take place in between scheduled patch removal and application (see Full Prescribing Information, **DOSE AND ADMINISTRATION**).

14. Patients should be advised to store Flector® Patch and to discard used patches out of the reach of children and pets. If a child or pet accidentally ingests Flector® Patch, medical help should be sought immediately (see **PRECAUTIONS, Accidental Exposure in Children**).

**Laboratory Tests:** Because serious GI tract ulcerations and bleeding can occur without warning symptoms, physicians should monitor for signs or symptoms of GI bleeding. Patients on long-term treatment with NSAIDs, should have their CBC and a chemistry profile checked periodically. If clinical signs and symptoms consistent with liver or renal disease develop, systemic manifestations occur (e.g. eosinophilia, rash, etc.) or if abnormal liver tests persist or worsen, Flector® Patch should be discontinued.

**Drug Interactions: ACE-inhibitors:** Reports suggest that NSAIDs may diminish the antihypertensive effect of ACE-inhibitors. This interaction should be given consideration in patients taking NSAIDs concomitantly with ACE-inhibitors.

**Aspirin:** When Flector® Patch is administered with aspirin, the binding of diclofenac to protein is reduced, although the clearance of free diclofenac is not altered. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of diclofenac and aspirin is not generally recommended because of the potential of increased adverse effects.

**Diuretics:** Clinical studies, as well as post marketing observations, have shown that Flector® Patch may reduce the natriuretic effect of furosemide and thiazides in some patients. This response has been attributed to inhibition of renal prostaglandin synthesis. During concomitant therapy with NSAIDs, the patient should be observed closely for signs of renal failure (see **WARNINGS, Renal Effects**), as well as to assure diuretic efficacy.

**Lithium:** NSAIDs have produced an elevation of plasma lithium levels and a reduction in renal lithium clearance. The mean minimum lithium concentration increased 15% and the renal clearance was decreased by approximately 20%. These effects have been attributed to inhibition of renal prostaglandin synthesis by the NSAID. Thus, when NSAIDs and lithium are administered concurrently, subjects should be observed carefully for signs of lithium toxicity.

**Methotrexate:** NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This may indicate that they could enhance the toxicity of methotrexate. Caution should be used when NSAIDs are administered concomitantly with methotrexate.

**Warfarin:** The effects of warfarin and NSAIDs on GI bleeding are synergistic, such that users of both drugs together have a risk of serious GI bleeding higher than users of either drug alone.

**Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis:** Long-term studies in animals have not been performed to evaluate the carcinogenic potential of either diclofenac epolamine or Flector® Patch.

**Mutagenesis:** Diclofenac epolamine is not mutagenic in *Salmonella Typhimurium* strains, nor does it induce an increase in metabolic aberrations in cultured human lymphocytes, or the frequency of micronucleated cells in the bone marrow micronucleus test performed in rats.

**Impairment of Fertility:** Male and female Sprague Dawley rats were administered 1, 3, or 6 mg/kg/day diclofenac epolamine via oral gavage (males treated for 60 days prior to conception and during mating period, females treated for 14 days prior to mating through day 19 of gestation). Diclofenac epolamine treatment with 6 mg/kg/day resulted in increased early resorptions and postimplantation losses; however, no effects on the mating and fertility indices were found. The 6 mg/kg/day dose corresponds to 3-times the maximum recommended daily exposure in humans based on a body surface area comparison.

**Pregnancy: Teratogenic Effects. Pregnancy Category C:** Pregnant Sprague Dawley rats were administered 1, 3, or 6 mg/kg/day diclofenac epolamine via oral gavage daily from gestation days 6-15. Maternal toxicity, embryotoxicity and increased incidence of skeletal anomalies were noted with 6 mg/kg/day diclofenac epolamine, which corresponds to 3-times the maximum recommended daily exposure in humans based on a body surface area comparison. Pregnant New Zealand White rabbits were administered 1, 3, or 6 mg/kg/day diclofenac epolamine via oral gavage daily from gestation days 6-18. No maternal toxicity was noted; however, embryotoxicity was evident at 6 mg/kg/day group which corresponds to 6.5-times the maximum recommended daily exposure in humans based on a body surface area comparison.

There are no adequate and well-controlled studies in pregnant women. Flector® Patch should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nonteratogenic Effects:** Because of the known effects of nonsteroidal anti-inflammatory drugs on the fetal cardiovascular system (closure of ductus arteriosus), use during pregnancy (particularly late pregnancy) should be avoided. Male rats were orally administered diclofenac epolamine (1, 3, 6 mg/kg) for 60 days prior to mating and throughout the mating period, and females were given the same doses 14 days prior to mating and through mating, gestation, and lactation. Embryotoxicity was observed at 6 mg/kg diclofenac epolamine (3-times the maximum recommended daily exposure in humans based on a body surface area comparison), and was manifested as an increase in early resorptions, post-implantation losses, and a decrease in live fetuses. The number of live born and total born were also reduced as was F1 postnatal survival, but the physical and behavioral development of surviving F1 pups in all groups was the same as the deionized water control, nor was reproductive performance adversely affected despite a slight treatment-related reduction in body weight.

**Labor and Delivery:** In rat studies with NSAIDs, as with other drugs known to inhibit prostaglandin synthesis, an increased incidence of dystocia, delayed parturition, and decreased pup survival occurred. The effects of Flector® Patch on labor and delivery in pregnant women are unknown.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human-milk and because of the potential for serious adverse reactions in nursing infants from Flector® Patch, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

**Pediatric Use:** Safety and effectiveness in pediatric patients have not been established.

**Geriatric Use:** Clinical studies of Flector® Patch did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

Diclofenac, as with any NSAID, is known to be substantially excreted by the kidney, and the risk of toxic reactions to Flector® Patch may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken when using Flector® Patch in the elderly, and it may be useful to monitor renal function.

**ADVERSE REACTIONS:** In controlled trials during the premarketing development of Flector® Patch, approximately 600 patients with minor sprains, strains, and contusions have been treated with Flector® Patch for up to two weeks.

**Adverse Events Leading to Discontinuation of Treatment:** In the controlled trials, 3% of patients in both the Flector® Patch and placebo patch groups discontinued treatment due to an adverse event. The most common adverse events leading to discontinuation were application site reactions, occurring in 2% of both the Flector® Patch and placebo patch groups. Application site reactions leading to dropout included pruritus, urticaria, and burning.

**Common Adverse Events: Localized Reactions:** Overall, the most common adverse events associated with Flector® Patch treatment were skin reactions at the site of treatment.

Table 1 lists all adverse events, regardless of causality, occurring in ≥ 1% of patients in controlled trials of Flector® Patch. A majority of patients treated with Flector® Patch had adverse events with a maximum intensity of "mild" or "moderate."

**Table 1. Common Adverse Events (by body system and preferred term) in ≥ 1% of Patients treated with Flector® Patch or Placebo Patch<sup>1</sup>**

Application Site Conditions	Diclofenac N=572		Placebo N=564	
	N	Percent	N	Percent
Pruritus	64	11	70	12
Dermatitis	31	5	44	8
Burning	9	2	3	<1
Other <sup>2</sup>	22	4	15	3
Gastrointestinal Disorders	49	9	33	6
Nausea	17	3	11	2
Dyspepsia	10	2	3	<1
Dyspepsia	7	1	8	1
Other <sup>2</sup>	15	3	11	2
Nervous System Disorders	13	2	18	3
Headache	7	1	10	2
Paresthesia	6	1	8	1
Somnolence	4	1	6	1
Other <sup>2</sup>	4	1	3	<1

<sup>1</sup> The table lists adverse events occurring in placebo-treated patients because the placebo-patch was comprised of the same ingredients as Flector® Patch except for diclofenac. Adverse events in the placebo group may therefore reflect effects of the non-active ingredients. <sup>2</sup> Includes: application site dryness, irritation, erythema, atrophy discoloration, hyperhidrosis, and vesicles. <sup>3</sup> Includes: gastritis, vomiting, diarrhea, constipation, upper abdominal pain, and dry mouth. <sup>4</sup> Includes: hypoesthesia, dizziness, and hyperkinesias.

Foreign labeling describes that dermal allergic reactions may occur with Flector® Patch treatment. Additionally, the treated area may become irritated or develop itching, erythema, edema, vesicles, or abnormal sensation.

**DRUG ABUSE AND DEPENDENCE: Controlled Substance Class:** Flector® Patch is not a controlled substance.

**Physical and Psychological Dependence:** Diclofenac, the active ingredient in Flector® Patch, is an NSAID that does not lead to physical or psychological dependence.

**OVERDOSAGE:** There is limited experience with overdose of Flector® Patch. In clinical studies, the maximum single dose administered was one Flector® Patch containing 180 mg of diclofenac epolamine. There were no serious adverse events. Should systemic side effects occur due to incorrect use or accidental overdose of this product, the general measures recommended for intoxication with non-steroidal anti-inflammatory drugs should be taken.

Distributed by: Alpharma Pharmaceuticals LLC  
 One New England Avenue, Piscataway, NJ 08854 USA  
 Telephone: 1-888-840-8884 • www.FlectorPatch.com  
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 Manufactured by: Teikoku Seiyaku Co., Ltd., Sanbonmatsu, Kagawa 769-2695 Japan  
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retrograde venous blood flow that further exacerbates venous hypertension. This causes compromise to the venous walls, allowing for leakage of fluids and blood components, including fibrin.

It has been theorized that leakage of fibrin leads to formation of a cuff around the vein, which compromises the respiration of the venous walls. As this fibrin cuffing increases, damage to the vein walls allows for leakage of additional substances and fluids which can now reach the tissues from which they originated. This results in tissue injury and loss of the fascial integrity; venous return is worsened, leakage increases, and a vicious cycle commences.

Initially, hyperpigmentation and red-brown discoloration from red blood cell extravasation appear (hemosiderin deposition). Later, eczematous changes develop and manifest as erythema, scaling, weeping, and crusting, all of which can be made worse by bacterial superinfection or by contact dermatitis from the many topical antimicrobial treatments often applied inappropriately, based on the erroneous assumption of infection.

### Stasis Dermatitis

As the disease progresses, episodes of diffuse inflammation of the leg, called *stasis dermatitis*, can develop acutely over hours or days.

Symptoms include itching, scaling, and diffuse inflammation. Interestingly, this is not usually associated with pain, fevers, and abnormal lab studies such as an elevated white blood cell count.

However, patients will frequently present with a history of multiple episodes and a misdiagnosis of cellulitis, in spite of the fact that their presentation, clinical findings, and work-up do not support this diagnosis. More interestingly, a review of their history does not reveal etiologies for these recurrent “infections.”

Thus, it is important to remember that this process is inflammatory, not infectious, in nature.

When chronic venous insufficiency and stasis dermatitis are both treated inadequately, progression to frank skin ulcerations called *venous insufficiency ulcers* (in the past referred to as *venous stasis ulcers*) occurs. While this is a relatively rare presentation in urgent care, it is important to remember that venous insufficiency may

Figure 3.



Venous insufficiency ulcers in various stages of healing. Note the epithelialization of the inferior wound on this. Posterior is a whitish scar from a previously healed ulcer called *atrophie blanche*.

be part of the bigger clinical picture for many patients who do present.

This constant and/or recurrent inflammation and scarring gives the deeper tissues a “woody” feel with incompressible skin better known as *lipodermatosclerosis* (Figure 1). If untreated, this often gives the lower leg an “inverted Coke bottle” shape with enlargement of the calf and narrowing at the ankle (Figure 2). The skin itself may have a shiny appearance and becomes hairless.

As these tissue injuries heal, they may leave a whitish scar called *atrophie blanche* at the site (Figure 3). This is a sign that the tissue did not heal normally, but was replaced by a more rigid, less elastic tissue more prone to injury.

### Differential Diagnoses

It is imperative to consider and evaluate the differential diagnoses of chronic venous insufficiency, as several have serious consequences if not identified and treated.

#### Congestive heart failure

Congestive heart failure may mimic venous disease with the presentation of edema of the ankles and lower legs. However, one early but subtle symptom of congestive heart failure is fatigue; this can be so subtle that the patient may not even sense decrease in energy and



may subconsciously reduce activities to accommodate this limitation.

As the heart failure progresses, bilateral swelling (edema) of the ankles and legs or abdomen may be noticed. Based on the pathophysiology of the disease, it rarely presents solely unilaterally, though one leg may be worse than the other. In addition, fluid may accumulate in the lungs, thereby causing shortness of breath, particularly during exercise and when lying flat. In some instances, patients awaken at night, gasping for air. Some may be unable to sleep unless sitting upright. The extra fluid in the body may cause increased urination, particularly at night.

These findings are uncommon in primary venous disease.

#### *Deep venous thrombosis*

Due to its significant sequelae (specifically, pulmonary embolism), deep venous thrombosis (DVT) is another condition that must be ruled out when performing a work-up in the urgent care setting.

Many patients later found to have DVT are asymptomatic. However, classic signs and symptoms are associated with obstruction to venous drainage. Pain and unilateral leg swelling can be seen. Nonspecific findings include warmth, erythema, a palpable cord in the tissues of the leg, pain upon dorsiflexion of the foot, and pain in the calf on forced dorsiflexion of the foot with the knee straight (Homan's sign).

When a patient presents with these symptoms, a diagnosis of DVT is strongly suggested. However, treatment should not be initiated based on clinical findings alone; even when a patient has a swollen, painful, congested leg, there is only a 50% chance that DVT is the correct diagnosis.

Unfortunately, absence of these signs and symptoms does not rule out DVT.

Risk factors for DVT that can be ascertained by questioning the patient or family member include long periods of immobility, recent surgery or trauma to the lower body, obesity, heart attack, heart failure, recent childbirth, use of hormone therapy or oral contraceptives, and advanced age

The presence of a DVT cannot be diagnosed or excluded based on clinical findings; thus, diagnostic tests must be performed whenever the diagnosis of DVT is being considered. Many of these, such as Doppler ultrasound and venography, are likely to be beyond the means of most urgent care centers. Hence, suspicion of DVT warrants immediate referral.

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**Cellulitis**

Cellulitis is, primarily, a true infectious process that initiates with some type of traumatic event resulting in a break in the skin of the lower extremity. There is an identifiable progression from the skin and tissue injury to a diffuse inflammation, with associated findings of elevated temperatures, pain in the affected extremity, redness, and swelling.

In cellulitis, this usually follows the skin injury; in venous disease, there is usually an episodic history of "cellulitis" prior to the acknowledgement of any skin trauma.

**Other possibilities**

Other possible causes of lower extremity edema include renal failure, endocrine abnormalities such as Cushing's disease or hyperthyroidism, and use of medications such as corticosteroids, birth control pills, antibiotics with a high sodium content, and nonsteroidal anti-inflammatory drugs.

**Lab Considerations**

With any disease entity, the clinician could order every conceivable lab test to rule in/out every eventuality that may present with similar signs and symptoms. However, particularly in the urgent care setting, it is best to rely on the time-honored practice of ordering a lab test only if it will change your diagnosis and your decision to treat or refer.

If the patient has previous labs, reviewing them may give you a clue that their presentation has been previously evaluated and save you the time and cost of an unneeded work-up. In addition, the history and physical examination should provide sufficient guidelines as to what labs may be beneficial.

If you feel further evaluation and labs are warranted, referring the patient for further testing is a valid option. As always, it is important to document this recommendation and to ensure that the patient or family member understand the possible consequences of failing to follow through.

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### A Focused Approach to Treatment

Once you have considered differential diagnoses and understand that the etiology is based on valvular dysfunction and loss of the fascial integrity, you can focus on treatment likely to solve these problems.

It may also become more evident why frequently used treatments such as whirlpools, antibiotic creams, oral or intravenous antibiotics, silver sulfadiazine (Silvadene, Thermazene), wet-to-dry dressings, and topical or systemic steroids don't work; they simply are not addressing the problem, which is threefold:

- dilatation of the veins
- separation of the valves
- damage to the fascia.

Appropriate treatments usually involve a commercially prepared multilayer wrap system of between two and four layers applied to the leg from the foot to the level of the knee, with each layer performing a distinct function:

- Layer 1 consists of cotton padding that absorbs moisture and shields the skin.
- Layer 2 is a short stretch wrap that provides low resting pressure and high working pressure.
- Layer 3, conversely, provides high resting pressure and low working pressure.
- Layer 4—the layer furthest from the surface of the skin—surrounds the other three layers, ensuring that they work in concert.

Together, these provide both support to the fascia and compression to the valvular structures. In essence, the pressure is increased so the retrograde flow is corrected.

In the two-layer system, layers 1 and 2 and layers 3 and 4 above are combined into two discrete layers which serve the same function.

Application of a skin cream may help ensure that the skin remains moist and healthy. I do not recommend the use of skin "lotions" as these have a higher water content and are absorbed too quickly to provide long-term skin hydration.

These products are worn from three to seven days, depending on how much drainage there is from the legs. I do not recommend using Unna boots (zinc oxide paste wraps), particularly in an urgent care setting, since this product tends to stop working after eight hours and to dry out the skin. There also tends to be less compression; as the edema resolves, the zinc oxide layer does not shrink and thus, there is neither contact nor pressure from the wraps to the skin.

For patients unable to tolerate wearing wraps 24 hours a day for the prescribed period of time, or toler-

ate compression during nocturnal periods of sleep, other treatments can be applied every morning and removed prior to going to bed.

Clearly, some of these treatment options beg follow-up care likely to be administered by another clinician. Again, it is vitally important that the patient or caregiver understand this, and that you document any recommendation you make to that effect.

### Compression stockings

Once active treatment with any of the aforementioned is completed and the venous insufficiency is well controlled, patients should be measured for a pair of compression stockings. This involves measuring the circumference at both the ankle and the calf. Elastic stockings are used to prevent the problem from recurring, but because they stretch and are not stiff, they only correct for the valve problem and not the fascial problem; therefore, they are inadequate for true "treatment."

Practitioners must ensure that patients understand that even if they wear the stockings continuously, swelling may recur and the compression wraps will need to be replaced.

Once the venous system and structures are damaged, it is unlikely they will ever be "normal" again. The key is to keep the veins functioning with compression.

We have found it effective to advise patients to think of the compression as they would medicine for a chronic condition (e.g., in the way that a patient with diabetes must continue taking insulin even if they feel better). Continuing treatment helps control the disease.

There are studies showing that pentoxifylline (Trental) is beneficial in reducing the risk of venous-related problems such as ulcers. This medicine works on the fibrin cuffing around the veins, allowing for better nutrient exchange. Use of other treatments such as nitroglycerine patches, phenytoin (Dilantin), or other compounds thought to improve peripheral circulation has not been shown to be effective in treating venous disease.

### Conclusion

The presence of lower extremity edema should induce you to identify the etiologies. It is imperative to identify the cause prior to referral or initiation of treatment, as the varied causes preclude a "magic bullet" approach such as diuretics or leg elevation.

Indeed, the knee-jerk use of antibiotics as first-line treatment without a work-up subjects the patient to additional time untreated and to the potential untoward sequelae of their inappropriate use. ■

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## Case Report

# A Patient with Suspected Pulmonary Embolism

**Urgent message:** High degree of suspicion combined with thorough history and proper use of available tests can help the clinician identify patients in need of emergent referral.

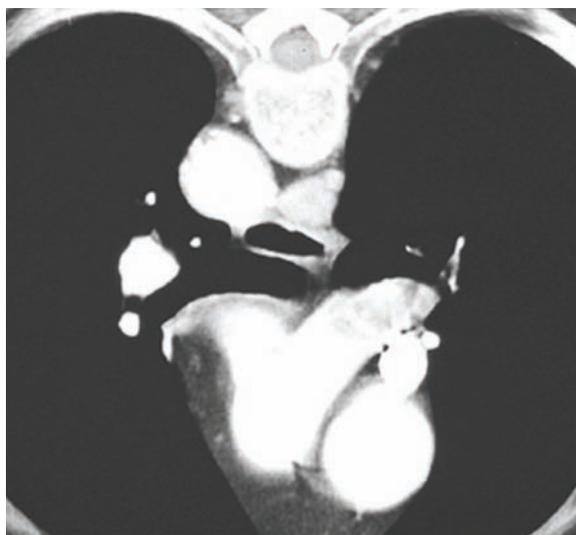
John Shufeldt, MD, JD, MBA, FACEP and Kelli Hickie

### Introduction

A 47-year-old woman with a diagnosis of ovarian cancer developed an acute onset of mild shortness of breath two days after being discharged for a work-up of symptomatic ascites. Her medical history was significant for obesity and recent travel. She presented to the emergency department and was found to have a large left pleural effusion and was subsequently admitted to the hospital.

A thoracentesis performed in the ED removed 2 L of fluid. During her hospital stay, her respiratory status improved and she was discharged home.

Two days later, she presented to an urgent care with the complaint of dyspnea. A chest x-ray was performed to rule out a pneumothorax from the thoracentesis or a reaccumulation of the effusion. The chest ray was negative for both. She was given albuterol in a small-volume nebulizer, improved post-treatment, and was sent home. At discharge, she was afebrile, with a room air pulse oximetry of 92%, pulse of 110 beats per minute, and respiratory rate of 24.



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The following day, she became dyspneic and cyanotic and complained of chest pain with hemoptysis. After a 911 call, she was taken to the emergency department where she arrested moments after arrival. Her resuscitation was unsuccessful. An autopsy revealed a large saddle embolus and acute cor pulmonale.

Her family sued the urgent care center, the physician, the hospital, and the emergency department attending for wrongful death secondary to failure to diagnose pul-

monary embolism. This article reviews the etiology, diagnosis, and treatment for pulmonary embolism (PE) in an urgent care setting.

### Pulmonary Embolism: An Overview

Pulmonary embolism is a remarkably common—and often underappreciated—leading cause of death in all age groups. In the U.S., roughly 60,000 people die per year from pulmonary embolism<sup>1</sup>; many of these cases are diagnosed at autopsy.

Pulmonary embolism and deep venous thrombosis

**Table 1. Common Risk Factors for Pulmonary Embolism**

- Prolonged venous stasis common in patients who are bedridden or who have traveled in an automobile or plane for hours
- Advanced age
- AIDS
- Autoimmune disorders (SLE)
- Burns
- Cancer and resultant chemotherapy
- Congestive heart failure
- IV drug abuse
- Family history of blood clotting disorder
- Fractures
- Immobilization
- Myocardial infarctions
- Obesity
- Oral contraceptives
- Postoperative and postpartum
- Protein S and C deficiency
- Trauma

(DVT) are conditions that stem from venous thromboembolism (VTE).

Three factors that promote intravascular coagulation include: immobilization, vessel wall damage, and hypercoagulability through either inherited defects or acquired factors that make patients more prone to clotting. Proximal DVT of the leg specifically describes blood clots located in the popliteal, femoral, or iliac veins, which is where the majority of blood clots associated with PE originate.<sup>2</sup> Approximately 60% to 80% of patients with DVT also suffer from a PE, but more than half of the patients are asymptomatic.

Pulmonary embolism is a potentially fatal condition which occurs when a blood clot detaches from the wall of a vessel and travels from one part of the body, typically the veins in the lower extremities, to the pulmonary artery or one of its arterioles, where it blocks blood flow to the lungs peripherally causing a pulmonary infarction.<sup>2</sup>

Most patients with PE and DVT go clinically unrecognized. Thirty percent of patients who survive an initial PE die of a future embolic event. Massive PEs can also cause acute cor pulmonale. When diagnosed correctly, it is more easily treated and complications are greatly reduced. However, the diagnosis is often delayed or the condition initially misdiagnosed due to its non-specific symptoms.<sup>1</sup>

Unfortunately, appropriate diagnostic tests and therapy are withheld even when the potential for PE has been clearly elucidated on the chart. It is particularly important for urgent care providers to keep a high index of suspicion about PE inasmuch as discharging a misdiagnosed patient with PE could result in untoward and devastating consequences.

For the provider to accurately diagnose PE in urgent care, it is particularly important to:

- obtain a thorough history
- perform a focused physical exam
- recognize the symptoms of PE
- initiate diagnostic tests
- refer the patient to the emergency room when appropriate.

### Patient History

Unfortunately, many urgent care facilities have limited access to the most accurate tests for PE. Hence, providers must take full advantage of the tools available.

One of the most important for the urgent care provider is the patient's history; approximately 75% of patients with VTE have at least one established risk factor.<sup>2-4</sup> (See **Table 1**). For a history to be of any value to a provider, it needs to have been taken in a detailed fashion that would accurately illustrate the subtle inconsistencies that separate PE from other potential diagnoses. If a patient's symptoms or history provide even a suspicion for PE, further testing needs to be done to rule out PE.

### Physical Examination

The physical examination of patients with suspected PE should be performed in a meticulous and exhaustive manner because of PE's variable signs and symptoms. Chest wall tenderness, with a history excluding trauma, is unsettling because it is one of the very few physical findings in patients with PE.

Providers also need to be on the lookout for unexplained anxiety, cyanosis, or general instability that can be caused by hypoxemia. Patients with PE often have a room air pulse oximetry of < 92%.<sup>3</sup> If a patient is experiencing shortness of breath, increased respiratory rate, or chest pain (fairly common symptoms of PE) they should be noted during the physical examination.

Nonetheless, it is possible for a patient experiencing PE to have none of these symptoms. The history and physical examination of a patient with suspected PE needs to be well documented.

### Symptoms

The symptoms of PE can vary widely from patient to patient (**Table 2**).<sup>3</sup> This variety, along with the non-specific nature of symptoms, contributes to the frequent misdiagnosis seen in the urgent care setting.



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**Table 2. Common Symptoms for PE\***

Symptom	Presentation (%)
Tachypnea	70-96
Dyspnea	73-84
Chest pain exclusively on one side	66-90
Sharp localized chest pain (often pleuritic)	66-74
Rales	51-58
Lower extremity edema	24-28
Hemoptysis	13-30
Syncope	5-13

\*This list is far from exhaustive. It is also important to note that the absence of one or all of these symptoms does not completely rule out PE.

Common differential diagnoses include asthma, bronchitis, pleurisy or pleuritis, intercostal muscle strain, Tietze's syndrome, hyperventilation, anxiety, and pneumonia.

These differential diagnoses are among many others with symptoms similar to PE and may, in fact, co-exist with PE.<sup>3</sup>

## Diagnosis

Currently, the best diagnostic test for PE is a CT angiogram of the chest. However, because this is typically unavailable in urgent care facilities, the next-best tests to help diagnose PE are a chest x-ray, an electrocardiogram (EKG), and a D-dimer test.

Both the chest x-ray and the EKG are useful in eliminating alternative diagnoses.<sup>5</sup> The physician should get definitive testing if basic work-up does not reveal a clear alternative diagnosis or if risk factors make the pre-test probability too high to ignore. Providers may also consult tools such as the Wells Prediction Rule in order to better assess the probability of PE in a patient based on the available clinical data.

Apart from eliminating an alternative diagnosis, chest x-rays have limited diagnostic value because they are typically normal in patients with PE.<sup>6</sup> In very few cases, a chest x-ray can show signs of PE in the form of a Hampton's hump, a "peripheral wedge-shaped, pleural-based density with apex pointing to the hilum,"<sup>3</sup> Westermark sign, an area of decreased pulmonary vascular markings,<sup>1</sup> or Palla's sign, noted by an enlarged, right, descending pulmonary artery.<sup>3</sup> Rarely are these signs obvious enough to make an accurate diagnosis of PE.

EKG results are abnormal in most patients with PE, but the abnormality is non-specific,<sup>5</sup> and <10% of patients show the classic right heart strain due to a PE.<sup>1</sup>

D-dimer is the final product of fibrin degradation, released in plasma. High levels of fibrin degradation products present in the blood are demonstrated by a positive serum D-dimer. A normal D-dimer can effectively rule out PE in more than 90% of cases.<sup>3</sup>

Conversely, an abnormal or elevated D-dimer can be attributed to a variety of conditions,<sup>1</sup> such as:<sup>1,3</sup>

- inflammatory diseases
- pneumonia
- myocardial infarction
- sepsis
- pregnancy
- trauma
- infection
- cancer.

D-dimer tests almost always show elevated levels among inpatients, so are of little value in that population.<sup>4</sup> They are of greater value in outpatients because they can almost always rule out PE, are non-invasive, and offer results in a short turnaround time.<sup>3</sup>

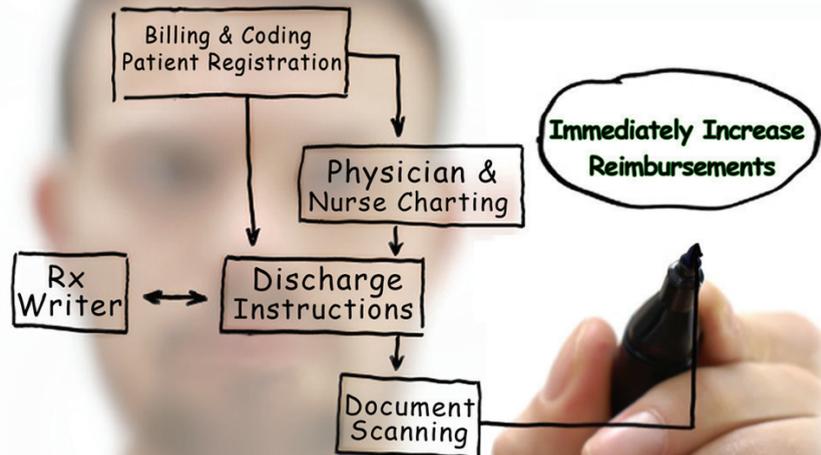
**Conclusion**

In order to accurately diagnose a patient with PE, the provider must obtain a thorough history from the patient, perform a focused physical examination, be familiar with the signs, symptoms and risks of PE, and perform the diagnostic tests available at that urgent care facility.

The combination of a high degree of suspicion coupled with the aforementioned will enable a provider to identify those patients who are at risk. If a patient is experiencing a PE, he should be referred expeditiously to an emergency department, where confirmatory testing and treatment can begin. ■

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If you would like to submit a case for consideration, please e-mail the relevant materials and presenting information to [editor@juqm.com](mailto:editor@juqm.com).

### The Case

The patient is a 29-year-old white male who presented three weeks after returning from a camping trip, during which he removed three ticks from his chest and back after being bitten.

He reports a one-week history of fever, fatigue, hot and cold spells, and arthralgia, and a one-day history of papular rash on the dorsum of his feet (**Figure 1** and **Figure 2**).

Physical examination was within the normal limits except for the rash

CBC and CMP were normal, with the exception of an AST of 78. Lyme antibody tests were negative. An antibody test for Rocky Mountain spotted fever (RMSF) was ordered, but that order was overlooked.

Nonetheless, a diagnosis of RMSF was made clinically; the patient was given doxycycline 100 mg po bid for 10 days. Within three days, however, follow-up revealed that the patient was back to normal, baseline health status. He continued the entire course of treatment, as directed.

### Review

The rash typical to Rocky Mountain spotted fever appears as small red spots and blotches that begin on the wrists, ankles, palms, and soles. Typically, symptoms occur one to two weeks after a tick bite with sudden onset of fever, myalgias, headache, and GI distress. The rash typically appears on the third through fifth day.

*Acknowledgment: Case presented and patient evaluated by Deepa Narayanan, MD, a Texas-based urgent care physician.*



Figure 1.



Figure 2.

*H.C. Chin, MD  
Anshin Medical Healthcare  
New York, NY*

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# Practice Management

## Getting the Word Out: An Introduction to Urgent Care Advertising

**Urgent message:** Unlike many other practice models, urgent care must appeal directly to the consumer to stay ‘top of mind’ and be the first option the patient considers when a need arises.

Alan A. Ayers, MBA, MAcc

### Introduction to Urgent Care Advertising

Urgent care is a healthcare delivery channel built around the needs of consumers—“retail,” from a marketing perspective—with convenient locations, evening and weekend hours, walk-in service, the capability to treat a range of illness or injury, and one simple bill.

From an accounting perspective, most of an urgent care center’s costs are fixed; rent, utilities, and staff and provider salaries must be paid regardless of the number of patients seen on any given day. As a result, the key driver of urgent care profitability is visit counts. The more patients an urgent care center sees, generally, the more profitable that center will become.

In order to drive those visits, urgent care must be visible and known in the community, just like other “re-



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tail” delivery models. A clean facility, talented staff, and efficient processes matter little if there are few patients coming through the door.

Positive word of mouth will make or break a business long-term, but in order to acquire new patients and reach critical mass—particularly for a start-up practice—paid advertising is also necessary.

### Purpose of Urgent Care Advertising

The purpose of urgent care advertising is to attain “top of mind” awareness in the field of potential patients, such that if consumers have a mi-

nor illness or injury, they will think of the urgent care center as the first place to go. Urgent care advertising must convey what differentiates urgent care from other medical providers (such as primary care, emergency rooms, and store-based clinics) while educating consumers as to the occasions when they would use urgent care.

**Table 1. Urgent Care Advertising Media**

■ Billboards/transit ads	■ Direct mail/shared mail
■ Yellow pages	■ Door hangers
■ Internet search engines	■ Brochure/flyer/pens
■ Internet banner ads	■ New movers services
■ Newspapers/magazines	■ Movie trailers
■ Specialty/niche publications	■ Radio/television

Many consumers have misperceptions about urgent care—they believe it's expensive, that it's for emergencies, or that "urgent" means zero wait.

Advertising messages should clearly set expectations in regard to services provided, hours of operation, and payment policies. As more of the general public understands the urgent care delivery model, urgent care will achieve its marketing goals of acquiring new patients and increasing utilization by established patients.

### Reach and Frequency

Two metrics—reach and frequency—are generally considered when evaluating an advertising opportunity. *Reach* refers to the number of people who see or hear an advertising message; *frequency* refers to the number of times they're exposed. Clearly, the greater the frequency, the more likely consumers are to remember a message.

While common sense may tell you that effective advertising should reach as many consumers as possible as frequently as possible, such is not necessarily the case. What's important is that an advertising message target the *right* consumers—those who are ready, willing, and able to utilize a service.

For urgent care, operational factors such as location or insurance plan participation may limit the target market. If an urgent care center does not accept Medicaid, for instance, it should not advertise to Medicaid populations.

Likewise, if a center operates on the west side of a large metropolitan area, radio advertising that is broadcast to the entire market may be ineffective with consumers who would have to drive from the east side but are unwilling to travel. Paying for exposure to consumers who cannot or will not use a service is an inefficient use of advertising dollars.

An integrated advertising plan should utilize the mix of tactics that are most likely to reach target urgent care consumers near your location. Generally, proximity is understood to mean a 15-minute drive time zone (or a three- to five-mile radius), depending on population density, competition, and traffic patterns.

**Table 1** lists common advertising tactics for urgent care centers. The tactics chosen should reflect the lifestyle and behavior patterns of the target market.

For example, a center located in a residential area may use direct mail, door hangers, and community newspapers to reach families with children, while an urban center might find bill-

boards, public transit ads, and flyer distribution through hotels and apartments more effective in targeting working professionals.

### First Things First

Before embarking on an advertising campaign, an urgent care operator should evaluate the center's readiness to serve the general public, including factors such as signage and visibility, operating hours, ages served, and in-network insurance. Attracting patients through advertising but then turning them away to other providers defeats the purpose of advertising and often results in negative word-of-mouth. Answering the following questions first may help ensure that your business is ready to benefit from the increased attention advertising will bring:

- Is the center easily accessible to traffic and does it have exterior signage that's visible from the street?
- Is the center open evenings and weekends and does it serve patients of all ages?
- Is the center contracted in health plans serving at least 75% of the population or does it offer an affordable cash payment option?

### Invest in good signage

The most valuable advertising tool an urgent care center can have is a location on a high-traffic street with clear and visible signage. When consumers drive past a sign, that sign acts as a billboard—a constant reminder that the urgent care center is available to meet their needs. Thus, the sign should be considered an advertising investment.

The sign should be simple, saying "Urgent Care" or a name that immediately connotes the same meaning. Intricate logos or elaborate fonts occupy space and don't necessarily resonate with consumers; hours, telephone number, provider name, and other information can clutter a sign.

Simple white lettering on a dark (black, blue, or red) background usually shows up better than dark lettering on a white background—particularly at night or when the urgent care center shares a sign with other building tenants.

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**Table 2. Advertising Content by Media Type**

	Less detail <span style="float: right;">→ More detail</span>		
	A	B	C
Media	Magnet, yellow pages, Internet banner	Postcard, flyer, newspaper	Website
Content to include	<ul style="list-style-type: none"> <li>■ Street address</li> <li>■ Phone number</li> <li>■ No appointment necessary</li> <li>■ “Evening/weekend hours”</li> <li>■ Illness/injury care</li> <li>■ Website address</li> </ul>	<i>Same as column A, adding:</i> <ul style="list-style-type: none"> <li>■ Abbreviated list of services offered</li> <li>■ Map or description of location</li> <li>■ Center operating hours</li> <li>■ Top 2-3 insurance plans accepted</li> </ul>	<i>Same as columns A and B, adding:</i> <ul style="list-style-type: none"> <li>■ Detailed list of services offered</li> <li>■ Detailed list of insurance plans accepted</li> <li>■ Physician biographies</li> <li>■ Pictures of the facility</li> <li>■ News, promotions, and community events</li> <li>■ Registration forms</li> <li>■ HIPAA notices</li> <li>■ Financial policy</li> <li>■ Frequently asked questions</li> </ul>

A good sign increases return on all other advertising; if consumers see a billboard or hear a radio ad and connect the message with a physical location they're familiar with, “top of mind” awareness is more likely to be attained.

### Advertising Messages

The content of urgent care advertising should be appropriate to the media used. Advertising needs to convey enough information for consumers to know where the center is located and when and why they might use it, but the ad doesn't need to share everything.

It may be tempting to include a photo or bio of the doctor or to list every single insurance plan, but such may add clutter and detract from the basic message.

The type of content to include depends to some degree on the medium (**Table 2**). For example, a magnet or yellow page ad might include only the center name, address, and telephone number, along with a very brief description of the services offered—such as “x-ray,” “evening/weekend hours,” and “no appointment necessary”—but it may refer consumers to a website for more detailed information on the providers and financial policies.

Unless a center is well established, there is risk in advertising exact center operating hours (particularly on magnets or flyers that consumers may hang on to), as hours may be subject to change.

### Return on Advertising Investment

Advertising for urgent care is unique among healthcare

providers. Unlike specialists whose primary target is referring physicians, or hospitals that advertise to recruit nurses and establish the quality and availability of a range of specialties, urgent care centers advertise to reach the end user—the patient with episodic healthcare needs. As a result, metrics established for other healthcare specialties don't necessarily apply to urgent care. Rather, urgent care advertising is better compared to “retailers” who appeal directly to consumers.

The challenge for urgent care advertising is that unlike an automobile, urgent care is not a planned purchase, and unlike breakfast cereal, it's not a product utilized every day. Large chain retailers like Best Buy and JC Penney have developed systems to evaluate the effectiveness of their promotions; if they run a Sunday newspaper circular, they can measure how many additional items were sold due to the ad. The same holds true for a restaurant or dry cleaner who distributes a coupon—they can track how many coupons were redeemed.

By contrast, urgent care advertising may be highly effective in reaching consumers who are fully committed to using the center; the problem is they just don't currently have an urgent care need, so a return on urgent care advertising may not be realized for months.

To track advertising effectiveness, many urgent care centers ask patients how they heard about the center, but if a center is running a multimedia advertising campaign, such surveys are imprecise.

*Continued on Page 34*



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## On Unreliable Eyewitness Accounts, Assessing Risk in GI Bleeding, and Febrile Seizures in Young Children

■ NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

### Beware of Eyewitness Accounts of Syncope or Seizures

**Key point:** *Bystanders' descriptions of acute neurologic events often are simply wrong.*

**Citation:** Thijs RD, Wagenaar WA, Middelkoop HAM, et al. Transient loss of consciousness through the eyes of a witness. *Neurology*. 2008;71:1713-1718.

Diagnosis of sudden catastrophic illness depends a good deal on eyewitness accounts. But, as criminologists know, eyewitnesses can be unreliable. Now, a team of neurologists in the Netherlands has reconfirmed this finding.

Psychology lectures that were attended by 229 students were suddenly interrupted by one of two short video clips. In one, a female tennis player faints; in the other, a woman suffers an epileptic seizure. On written multiple-choice questionnaires that were administered right after the videos ended, the students answered descriptive questions about each event correctly only about half the time (44% for the syncopal episode; 60% for the seizure). Questions about limb twitching—particularly useful for distinguishing between the two diagnoses—were answered incorrectly as often as 40% of the time, and, in some cases, nearly as many students simply did not know whether twitching of a specific limb was present or not.



**Nahum Kovalski** is an urgent care practitioner and assistant medical director/CIO at Terem Immediate Medical Care in Jerusalem, Israel.

In previous studies, researchers have found similar problems with eyewitness accuracy when witnesses are asked to describe neurologic events. These authors go a step further and suggest some tips for clinicians.

First, history takers should phrase questions carefully. For example, instead of asking, “Did the right leg twitch?”, asking “Do you know if the right leg twitched?” The latter wording relieves witnesses of the temptation to make incorrect guesses.

Second, a patient’s own recall of circumstances leading up to an event generally should be given greater weight than eyewitness reports, particularly if the two accounts conflict.

[Published in *J Watch Gen Med*, December 11, 2008—Abigail Zuger, MD.] ■

### In Upper GI Bleeding, Choosing Who Gets Admitted and Who Goes Home

**Key point:** *None of the patients with a low Glasgow-Blatchford bleeding score required intervention for hemorrhage or had died after at least six months' follow-up.*

**Citation:** Stanley AJ, Ashley D, Dalton HR, et al. Outpatient management of patients with low-risk upper-gastrointestinal haemorrhage: Multicentre validation and prospective evaluation. *Lancet*. 2009;373:42-47.

A scoring system based on simple clinical evaluation and without the need for endoscopy can identify low-risk patients who present with upper gastrointestinal bleeding, according to a *Lancet* study released online.

*Continued on page 36*



## Beware the BFRF!

■ JOHN SHUFELDT, MD, JD, MBA, FACEP

Remember the scene in *Ghostbusters* when Gozer (the Gozarian) asks Ray Stantz if he is a “god?” Stantz, compulsively honest, says, “No.” Gozer says, “Then die,” as he tries to blow them off the roof of the building.

After recovering, Peter Venkman yells at Stantz, “If someone asks if you are a god, you say YES!”

The question Gozer asked Stantz was a red flag—one of those moments when you want to consider your options before blindly plunging in and sealing your fate.

I have the privilege of working with an extraordinary person of unmatched enthusiasm, integrity, intelligence, and beauty. She is the president of NextCare, the chairperson of the Arizona Foundation for Women, and a devoted wife and mother. All in all, she is the “complete package.” Among her many other accomplishments, she coined the phrase, “BFRF.”

A “BFRF” is a big “f-ing” red flag. She is way too classy to ever say the “f-word,” so it is left up to your imagination what word to substitute.

Over the years, I have kept a list of things that should make the hair on the back of your neck stand up, although I did not know what to call the collection until “BFRF” entered my vocabulary. Much of the list has to do with medicine, some items have to do with activities of daily living, and a couple have not found a home.

So, the following is a list of “BFRFs” I collected over the years; feel free to use them as your own. They have certainly saved me a few times when I was about to get blown off the roof. Some may even keep you out of court or help you be a better practitioner.

1. When a patient tells you, “I think I am going to die,” believe him.
2. Never discharge a patient with abnormal vital signs unless you understand and have documented the reason for the abnormality.



**John Shufeldt** is the founder of the Shufeldt Law Firm, as well as the chief executive officer of NextCare, Inc., and sits on the Editorial Board of *JUCM*. He may be contacted at [JJS@shufeldtlaw.com](mailto:JJS@shufeldtlaw.com).

3. Never try to do a back flip after consuming alcohol.
4. Never barefoot ski (water or snow) if you are not an expert.
5. If a patient has a foreign object in their rectum, it really is important to establish the true etiology of the insertion. Don't fall for the, “It was a million to one shot, doc” story.
6. Do not hire someone who is rude to your receptionist or assistant.
7. Do not hire someone who won't shake your hand because they are a “germophobe.”
8. Don't date (or marry) someone who is rude to waiters or waitresses.
9. Don't hire, date, or marry anyone who is a “hater.”
10. If a patient wants someone to stay in the room with them for the exam, procedure, etc., let them.
11. When a patient starts dry heaving, physically turn their head away from you (and toward your least productive staff member).
12. “Two beers” is always more than two beers. Unless of course, they are 44-ounce cans.
13. Never eat food that has been sitting in the nursing break room. You will die either from the food or by the hand of the nurse who brought the food.
14. Never kill a bee by slapping it on your own skin.
15. Hanging upside down while drinking a margarita is a sign that you are drunk, stupid, or both (from experience).
16. If an employee tells you they are doing their best when obviously they are well below the mark, believe them—and then fire them.
17. Never discharge a patient who acutely cannot ambulate (unless of course they have a fractured leg).
18. You can't teach kindness or compassion; if a caregiver does not demonstrate those characteristics, they should be working in the food service or the janitorial industry.
19. When your gut tells you something, believe it.
20. When a patient says “stop” during a procedure, stop the procedure.
21. Never use a cautery on a patient after using topical anesthetic spray.

22. “My prescription for Percocet fell in the toilet; was eaten by my dog; was stolen; etc.” is a red flag, especially in our field.
23. When nurses say, “Are you sure you want to discharge this patient?” rethink your options.
24. Don’t play basketball with dangly earrings.
25. Tattoos of swastikas or of “Mom” spelled incorrectly bear special consideration.
26. Don’t defibrillate someone while standing in water (from experience).
27. Don’t use a trocar for a left-sided chest tube in a patient with cardiomegaly.
28. Don’t perform a lumbar puncture on a person with an international normalized ratio score >3.
29. Arrogant people rarely improve their demeanor.
30. Laziness and negativity are contagious; eradicate the source or it will infect your entire staff.
31. If someone says they have syphilis, check their HIV status.
32. Providers who were accused/convicted of having sex with patients are probably not “good hires.”
33. Job hopping is never a good way to build a resume or obtain a worthwhile position.
34. Never hire someone who in the job interview identifies “turning their employer in to OSHA” as their greatest contribution at their last job.
35. Flirting during an interview is always a red flag.
36. Before interviewing a prospective employee, check their MySpace and Facebook pages. Comments like, “Thanks for the great weed dude should be worrisome.
37. Answering a cell phone while talking to a patient is an issue.
38. Providers who insist on praying with their patients before doing a procedure on them should scare the heck out of you (and the patient).

39. Saying “This won’t hurt a bit,” when it does hurt.
  40. Calling in sick for a simple cold or the flu.
  41. Snapping gum, chewing with mouth open, saying, “Like” every sentence.
  42. The tougher the pre-hire negotiation, the more high maintenance the employee.
  43. Hiring a physician through a search firm is usually a red flag.
  44. You can’t teach efficiency in patient care. A slow provider is and will always be a slow provider.
  45. Applicants who “hit on your staff” during their interview process are never good hires.
  46. Never believe someone who says, “There is no possible way I could be pregnant” unless it is a man, a woman who is sans uterus and ovaries, or a woman over 70.
  47. An employee who calls in sick three days before their shift should raise suspicion.
  48. Fingernails stained with nicotine, clothes or hair which smells like smoke; their smoking breaks will outnumber their productive work hours.
  49. Employees whose claim to fame was, “I once was the Oscar Meyer Weiner girl.”  
And last, but not least!
  50. Sub-specialists who want to work in urgent care centers (there is always a story and it usually is not a good one).
- The aforementioned list is by no means exhaustive. I am sure that given some serious consideration, many of you will have BRFs that I cannot fathom.
- The take-home point is this: Not trusting your gut is like “crossing the streams” (which is to say, bad). And in case it’s been a while since you’ve seen *Ghostbusters* and are fuzzy on the whole good/bad thing, Dr. Egon Spengler explains it thusly: “Try to imagine all life as you know it stopping instantaneously and every molecule in your body exploding at the speed of light.” Important safety tip! ■

Advertising, continued from page 30.

Ultimately, what did bring the patient into the center—driving past the sign every day, hearing the radio ad, or receiving a magnet in the mail? Most likely, all three were responsible for attaining the top-of-mind position that ultimately led the consumer to the center when their need arose.

The point is that in order for consumers to think of the urgent care center as the first place to go when an injury or illness occurs, the urgent care center must constantly have its message in front of consumers. As a center starts to understand its patients, it will come to realize which advertising tactics are most effective. Because advertising must balance the operating model

and target market, there is no one-size-fits-all solution.

**Conclusion**

When it comes to advertising, there are almost limitless possibilities; which or how many are pursued depends on how much the urgent care operator wants to spend. Any combination of a wide mix of media—from Internet search engines to yard signs to an airplane banner at a ball game—could be effective.

Because advertising effectiveness is influenced by the target market, location, signage visibility, and operating model of a center, what works for one center may not work for another. But all successful urgent care operators know that in order to drive new business, some paid advertising must be part of the plan. ■



## Protecting Your Position as Market Leader

■ FRANK H. LEONE, MBA, MPH

It's great to be on top, but when a clinic is "fat and happy," its focus on sales and marketing can lose its intensity. Consequently, your clinic may be in danger of losing its crown without realizing your leadership position is in jeopardy.

This month's column addresses this dilemma faced by urgent care clinics that are market leaders.

Instead of assuming that the "best offense is a good defense," in some cases the best defense becomes a good offense.

The following suggestions can help all urgent care clinics that offer occupational health services—leaders and followers—guard against complacency and secure a more dominant position in the marketplace.

**Protect your base.** Implement a plan to ensure that your market share remains intact. Too often, a clinic *assumes* that patients or employer clients are satisfied and fails to learn about dissatisfaction until the patient or client has moved their business elsewhere.

Protecting your base means keeping your ear close to your customers. It is advisable for all players to continually assess consumer satisfaction through multiple modalities.

Examples of consumer opinion-gathering mechanisms include annual employer surveys, quarterly telephone blitzes, and universal, (i.e., every patient, every day), albeit simple, patient satisfaction surveys.

Many clinics gather such data but fail to:

- ask the right questions. Remember to always ask consumers what your clinic can do to improve.
- follow up. Always follow up on concerns or suggestions.
- be relentless. Sustain the effort, month after month,



**Frank Leone** is president and CEO of RYAN Associates and executive director of the National Association of Occupational Health Professionals. Mr. Leone is the author of numerous sales and marketing texts and periodicals, and has considerable experience training medical professionals on sales and marketing techniques. E-mail him at [fleone@naohp.com](mailto:fleone@naohp.com).

year after year.

- provide inordinate attention to employers who generate an inordinate amount of business.

**Emphasize horizontal expansion.** "Horizontal expansion" means increasing market share by developing relationships with new companies.

As market leaders become fat and happy, there is inevitably less impetus to extend into the prospect fringes to acquire business from less proximate or smaller companies.

**Begin expanding vertically.** The greater your market share, the greater your need to think more in terms of vertical expansion—selling new services to existing clients.

The vertical/horizontal choice is really a continuum, and a prudent clinic should pursue both. For example, a clinic should tilt toward the vertical end of the spectrum as it attains a greater market share or if it operates in a smaller, less competitive market.

**Use market leadership as a competitive advantage.** Prudent buyers are more comfortable with proven market leaders (i.e., "They must be doing something right."). Yet market leaders seldom use market leadership as a competitive advantage.

There are many ways to tout your market leadership in tasteful yet clear terms:

- Create exhaustive reference lists. List virtually all of your employer relationships.
- Use tag lines such as "The leading provider of occupational health services in Crescent City."
- Mention your dominant position in both oral and written sales presentations.
- Emphasize that your clinic has relationships with key companies in your market.

**Encourage growth through a viable incentive plan.** Incentive pay should be built into sales professionals' com-

*“Building on market leadership should be central to the strategic thinking of every market leader.”*

pensation. Such incentives should promote gross revenue, whether it is generated through vertical or horizontal sales.

**Differentiate by focusing on competitor vulnerabilities.** Ahead by two touchdowns early in the fourth quarter? Don't run the ball into the line. Open up your passing attack, especially if that strategy plays into your opponent's greatest liabilities.

In occupational health sales, stick with the playbook that got you in the lead in the first place: selling on your competitive advantages vis-à-vis your prime competitors.

**Leverage down times through a survival-of-the-fittest mentality.** There is a silver lining out there for market leaders dealing with our current economic downturn. Market leaders are in the best position to quickly regain their strength in the next economic upswing because survival-of-the-fittest principles either weaken or put more vulnerable competitors out of business.

As a market leader, you should invest in more intense sales and marketing to take advantage of your weaker competitors' likely inability to respond in turn.

**Watch for signs of slippage.** Few clinics proactively monitor metrics such as lost market share, decreasing revenue, or client movement. Monthly scrutiny of such metrics is essential, and immediate action should be taken to stem negative tides.

Building on market leadership rather than letting it slip away should be central to the strategic thinking of every market leader. Market leadership provides many compelling competitive advantages, yet most urgent care occupational health programs take it for granted, thereby setting themselves up to slowly but surely lose their grip on the market.

If not taking advantage of a great mind is a notable tragedy of mankind, then not taking advantage of your market leadership's inherent advantages may be a notable downside of your clinic's strategic plan. ■

Researchers compared two scoring systems for predicting level of risk in patients presenting with upper GI hemorrhage to four U.K. hospitals—the widely used Rockall score and the newer Glasgow-Blatchford bleeding score (GBS). The GBS is based on lab values—namely, blood urea and hemoglobin—along with systolic pressure, pulse, and presenting signs. Patients with normal values and no melena, syncope, or evidence of liver disease or heart failure are considered to be at low risk and thus eligible for outpatient management.

The GBS outperformed the Rockall score at identifying low-risk patients in the ED, resulting in fewer hospitalizations. ■

**Utility of Lumbar Puncture for First Simple Febrile Seizure Among Children 6 to 18 Months of Age**

*Key point: The risk of bacterial meningitis presenting as first simple febrile seizure at ages 6 to 18 months is very low.*

*Citation: Kimia AA, Capraro AJ, Hummel D, et al. Utility of lumbar puncture for first simple febrile seizure among children 6 to 18 months of age. *Pediatrics*. 2009;123(1):6-12.*

The American Academy of Pediatrics consensus statement recommendations for lumbar puncture for cerebrospinal fluid analysis are:

- consider **strongly** for infants 6 to 12 months of age with a first simple febrile seizure, and
- consider for children 12 to 18 months of age with a first simple febrile seizure.

A retrospective cohort review was performed for patients 6 to 18 months of age who were evaluated for first simple febrile seizure in a pediatric emergency department between October 1995 and October 2006.

First simple febrile seizure accounted for 1% of all emergency department visits for children of this age, with 704 cases among 71,234 eligible visits during the study period. Twenty-seven percent of first simple febrile seizure visits were for infants 6 to 12 months of age; 73% were for infants 12 to 18 months of age.

Lumbar puncture was performed for 38% of the children. Samples were available for 70% of children 6 to 12 months of age (131 of 188 children) and 25% of children 12 to 18 months of age (129 of 516 children).

Rates of lumbar puncture decreased significantly over time in both age groups. The cerebrospinal fluid white blood cell count was elevated in 10 cases (3.8%). No pathogen was identified in cerebrospinal fluid cultures. Ten cultures (3.8%) yielded a contaminant. No patient was diagnosed as having bacterial meningitis.

The risk of bacterial meningitis presenting as first simple febrile seizure at ages 6 to 18 months is very low. Current American Academy of Pediatrics recommendations should be reconsidered. ■

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# Career Opportunities

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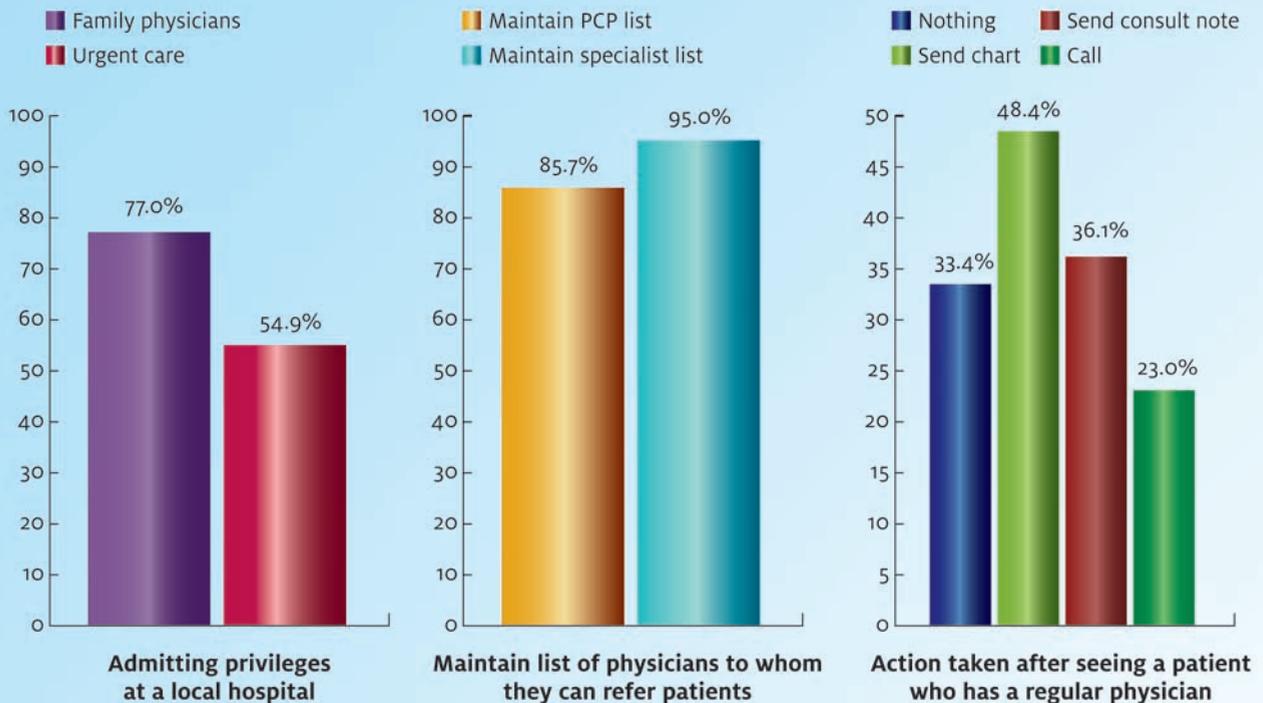
# DEVELOPING DATA

In early 2008, UCAOA revamped its annual survey in conjunction with researchers at Massachusetts General Hospital and Harvard University with the goal of assuring that the UCAOA Benchmarking Committee's efforts produced a scientifically valid report.

Over the coming months in Developing Data, *JUCM* will present some of the findings from this landmark survey, to which 436 urgent care centers responded.

*In this issue:* How deeply is urgent care integrated within the larger U.S. healthcare system? What are the "norms" for admitting privileges and maintaining referral lists among urgent care physicians, and what action do urgent care centers tend to take after seeing patients who have a regular physician?

## INTEGRATION WITHIN THE HEALTHCARE SYSTEM



The difference between urgent care and family medicine in the area of admitting privileges is to be expected, due to the nature of the urgent care environment; typically, urgent care clinicians do not follow their patients over time or if they are hospitalized.

*Acknowledgment:* Data submitted by Robin M. Weinick, PhD, assistant professor, Harvard Medical School and senior scientist, Institute for Health Policy, Massachusetts General Hospital. Dr. Weinick is also a member of the *JUCM* Advisory Board. Financial support for this study was provided by UCAOA.

If you are aware of new data that you've found useful in your practice, let us know via e-mail to [editor@jucm.com](mailto:editor@jucm.com). We'll share your discovery with your colleagues in an upcoming issue of *JUCM*.

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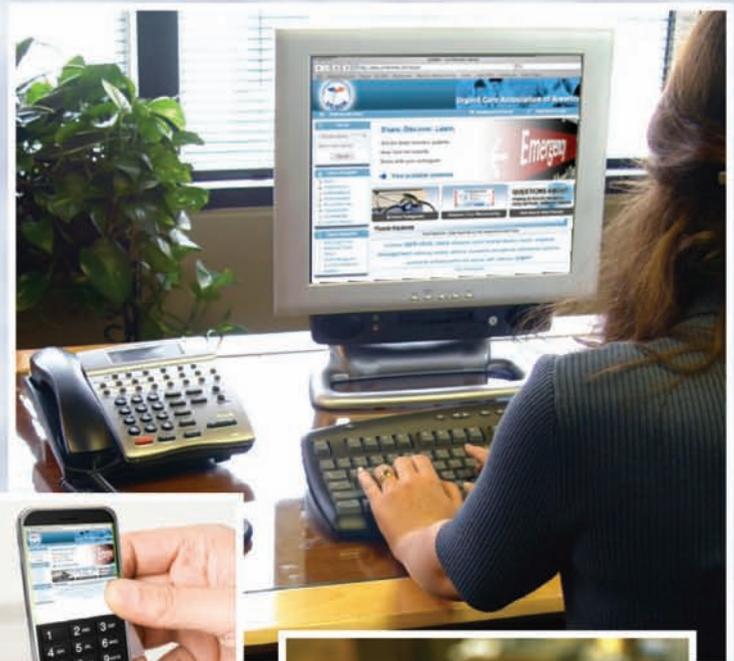
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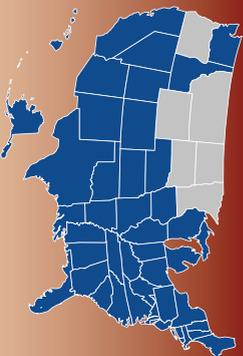


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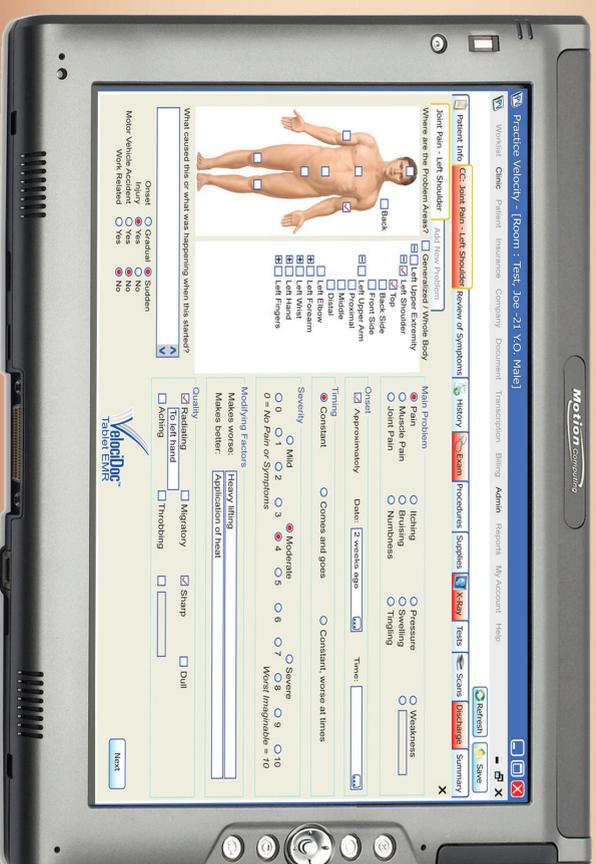
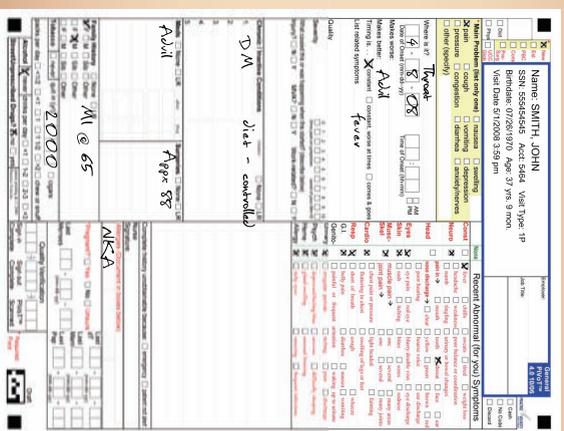


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